

Temporal Network Overview

The temporal network is responsible for efficiently ensuring consistency with temporal constraints. To use the temporal network, one instantiates a TemporalPropagator, which will register itself with a supplied constraint engine. One can attach a listener to the temporal network in order to monitor events in the temporal network. There is also a special purpose temporal advisor defined for the STP as part of the TemporalNetwork module.

API

The main class in the temporal network is the TemporalPropagator. Instantiating the TemporalPropagator will create a TemporalNetwork. It will also associate the propagator with the given constraint engine.

The temporal network can be monitored by adding a TemporalNetworkListener to the TemporalPropagator. The temporal network can be queried through four reader functions defined on TemporalPropagator.

Other key classes include the temporal constraints.

Using the Temporal Network API

The "testTemporalPropagation" in the TemporalNetwork module tests provides a good example of how to instantiate and use the TemporalNetwork.

The components of this module demonstrate how to augment system behavior through inheritance.

- STNTemporalAdvisor from DefaultTemporalAdvisor
- TemporalPropagator from Propagator
- TemporalDistanceConstraint from AddEqualConstraint

Class Diagrams

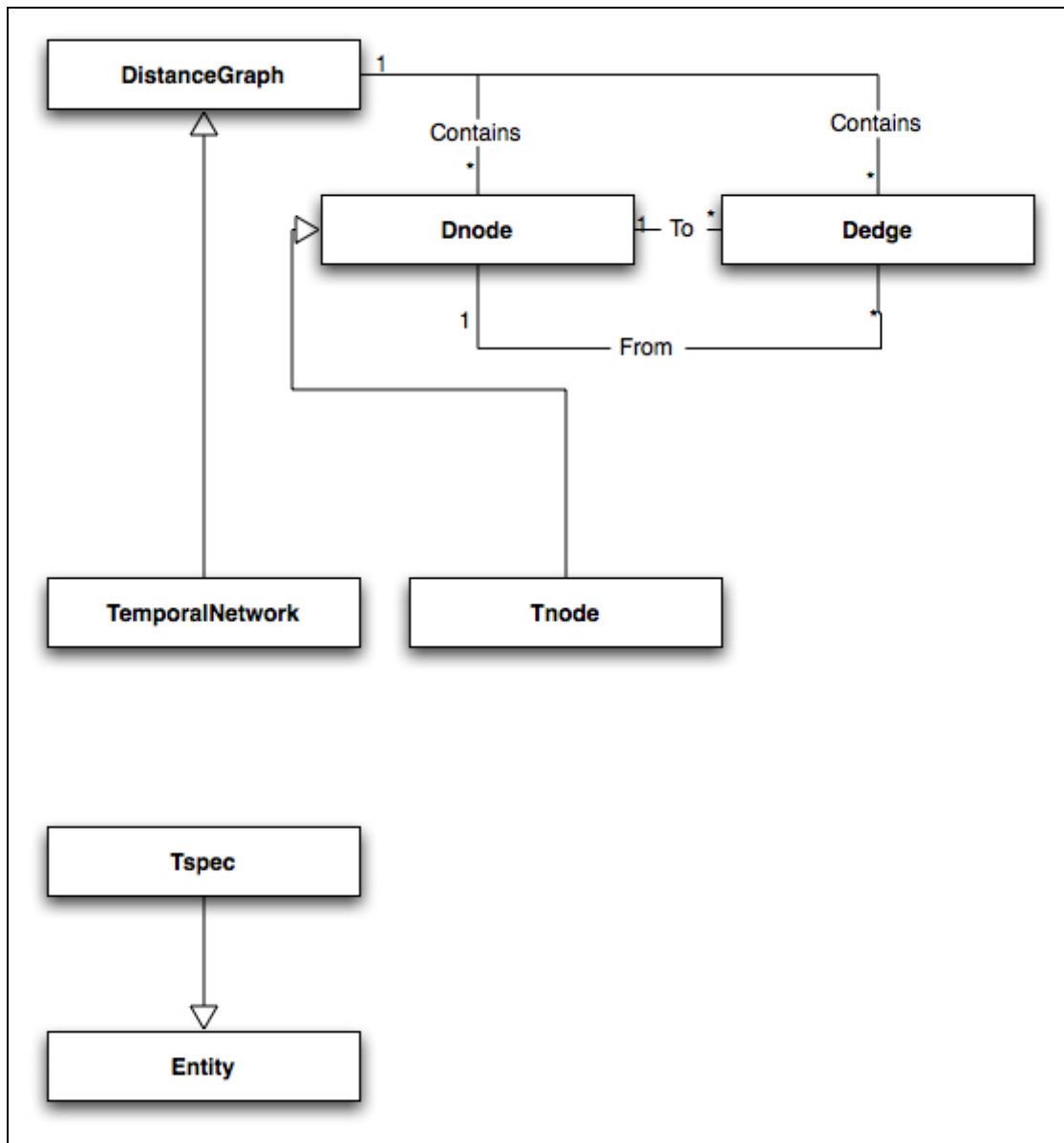


Figure 1: Distance Graph and Temporal Network.

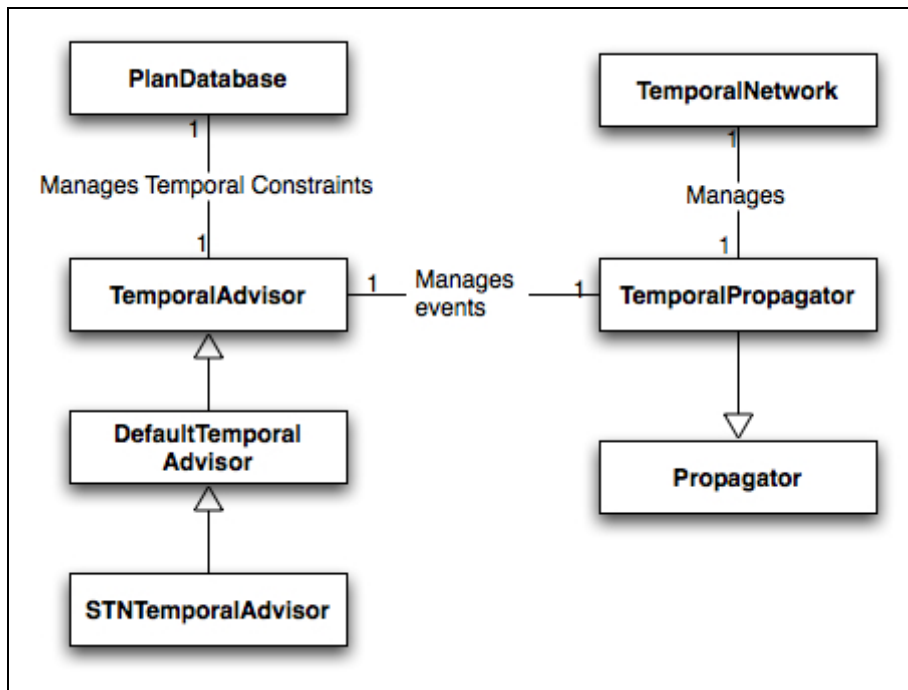


Figure 2: Temporal Network Collaboration Diagram